

Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The final Office Action dated January 18, 2005, indicated that claims 1-20 are rejected under 35 U.S.C. § 103(a) over Zimmermann *et al.* (U.S. Patent No. 6,162,735) in view of Phaneuf *et al.* (U.S. Patent No. 6,288,393).

Applicant respectfully traverses the Section 103(a) rejection because the Office Action fails to present a combination of references that corresponds to the claimed invention. The Office Action asserts that the '735 reference teaches recording a plurality of images of the selected portion as substrate is being removed therefrom, as claimed, at col. 5, lines 15-46. However, the cited portion does not appear to teach any recording of images. The '735 teachings merely disclose using an SEM to observe a target but makes no mention of recording a plurality of images. Without a presentation of correspondence to each of the claimed limitations, the Section 103(a) rejection is improper and cannot be maintained. Accordingly, Applicant requests that the rejection be withdrawn.

With particular respect to the Section 103(a) rejection of claims 12 and 13, Applicant respectfully traverses the Official Notice taken at page 5 because it is unclear that the skilled artisan would edit a three-dimensional image since a three-dimensional image would not be formed. As discussed above, the '735 reference does not teach recording images with which to create a three-dimensional image. *See* MPEP § 2144.03.

Applicant further traverses the Section 103(a) rejection because the '735 reference teaches away from the proposed combination with the '393 reference. The Office Action proposes modifying the '735 in-situ defect analysis method to include the automated imaging method taught by the '393 reference. The '735 reference is directed to in-situ post-manufacture analysis of a semiconductor chip in a chamber. Col. 4, lines 42-44. The '393 reference is not directed to failure analysis but instead to automating reverse engineering of semiconductor chips in an ex-situ system that disregards the integrity of the chip once the process is complete. *See* Abstract, Fig. 4. The '735 reference teaches directly away from the ex-situ method employed by the '393 reference. Thus, the skilled artisan would not be lead to combine the cited teachings as asserted and the rejection fails due to a lack of evidence of motivation. Applicant accordingly requests that the rejection be withdrawn.

Moreover, the proposed modification of the '735 reference is improper because it would frustrate the purpose and operation of the '735 reference. The MPEP states that when a proposed modification would render the teachings being modified unsatisfactory for their intended purpose or operation, then there is no suggestion or motivation to make the proposed modification under 35 U.S.C. § 103(a). *See* MPEP § 2143.01. The '735 reference is directed to a site-specific method of finding pinholes in dielectrics by observing an etch process in order to identify the pinhole. *See* Col. 1, lines 65-66. The '393 etching method, however, is an automated method that etches and subsequently images layers as they are removed. *See* Col. 7, lines 18-20. Inclusion of this automated etching/imaging method would replace the '735 method's observation aspect of the etch process and would undermine the purpose of the observation by etching through any potential pinholes. A skilled artisan would not be led to modify the '735 teachings in such a destructive manner and such a suggestion is untenable. Accordingly Applicant submits that the proposed combination is improper and requests that the rejection be withdrawn.

In view of the above discussion, Applicant believes that the rejection has been overcome and the application is in condition for allowance. A favorable response is requested. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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By: 

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